

Study of Robotic Process Automation (RPA)

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Abstract:- The present business scenario is partly automated. Many companies use ERP, core banking, and other such systems to cater their businesses. Each company require a lot of Human Resources to handle these systems. It is obvious that when there is human intervention, chances of errors are comparatively high. As a result, end customer faces some or the other problem which will again give some pain to the Human Processor to amend the erroneous actions taken earlier. Hence, to serve the customers in a faster an consistent way and to help increase the potential of the personnel in the key areas of the business, a new technology called Robotic Process Automation (RPA) is on its way.

This project is aimed at understanding the uniqueness and merits of the RPA system adopted by many organizations and its impact on the working of back hand operations of these Multinationals.

Research has showed that RPA is a much better way to carry on day-to-day operations with a quality achievement of almost 99%. Along with the quality, there are much more advantages like Direct Business Benefit, Faster processing & Cost advantage. The focus of my research was to automate the ERP systems, keeping in mind the business areas where the Human Resources are needed. My job was to analyze the technology with respect to the scale it can be used to. There can be no better opportunity to interact with the external as well as the internal resources of an organization. Finally, the results of the research verify the fact that RPA will definitely help improve the working style of the organizations with more efficiency and less errors.

Keywords:-

- RPA (Robotic Process Automation)
- ERP (Enterprise Resource Planning)
- FTE(Fully Trend Employee)
- SLA(Service Level Agreement)
- SCM(Supply Chain Management)
- HRM(Human Resource Management)
- AI (artificial intelligence)
- TAT (Turn Around Time)
- CRM (Customer Relationship Management)

1. Literature Review:

Call it development or our quest for excellence, our industry has seen many waves – big and small, in the last three decades. All of these have touched the core of businesses, thereby automating business processes at every stage across enterprises.

In the 90s, it was the ERP (Enterprise Resource Planning) wave that automated several horizontal processes across industry verticals – Finance, Accounting, HR, etc. This was a journey that most companies undertook and there are many that are still continuing on this journey. This surely goes a long way to prove that ERP has indeed added tremendous value to these organizations, so much so that they have continued to carry on with it. ERP succeeded in ensuring standardization and scalability. It also helped reduce errors, improved compliance and generated faster turnaround. The ERP wave helped create such tremendous job opportunities in the IT industry that, at one point, the demand for professionals far exceeded the supply.

The ERP wave was followed by the wave of “Leveraging the Cost Arbitrage” in early 2000s. Significant business processes that companies hitherto considered the core of their existence were outsourced. As a result, BPOs mushroomed all around, providing similar or better level of services at much lower costs. The cost of off shoring, however, continued to rise due to the imbalance in Demand and Supply (the rate of growth in demand was far higher than the supply). It was during the same period that markets across

the globe were getting commoditized and were therefore under tremendous pressure for margins. It was during this time that a need was felt for the next big wave was felt more than ever before. This was also a period when huge technology evolution was making its presence felt. The new century introduced the power of web enablement, leveraging thin clients that helped enterprises adopt self-service.

RPA is the next wave in technology and its assurance is Increased productivity, less errors & cycle time, and improved scalability. RPA means we have switched from an analog style of "knowledge swap" between humans to a digital world where knowledge is transferred by robots. Another significant change is the deployment across processes that have been tormented for so many decades by manual interventions, such as invoice processing and collections, in addition to higher knowledge-value areas, such as reporting analytics. We are no longer looking at RPA as a future technology, as it's already taking over physical labor today.

2. Robotic Process Automation (RPA)

Robotic Process Automation (RPA) is the use of software with artificial intelligence (AI) and machine learning capabilities to handle high-volume, repeatable tasks that previously required a human to perform. The cost savings/payback may not be realized immediately after the ERP implementation & it is quite difficult to measure the same. Robotic Process Automation aims to use a computer to manipulate existing application software (CRMs, ERPs, help

desk and claim applications) in the same way that a person works with those systems and the presentation layer to perform a specific task. Scholars in the BPO/KPO and IT bays know that the robotic process automation has the ability to transfigure the way we do business. As global organizations become familiar with this powerful, emerging technology, people will quickly understand the benefits it offers over outsourcing and other methods of business processes.



3. Why Robotic Process Automation?

For enterprises, BPOs and shared services that use large scale, high-volume human labor with an intrinsic exigency for productivity and cost efficiency, RPA technology adds impetus to business innovation and profitability. It enables organizations to configure software robots that automate manual and repetitive rule-based tasks at a fraction of the cost of their human equivalent and to integrate without disrupting the legacy system. Robots are easy to train and see the interface like a human. They can act as automated assistants and are designed to collaborate with humans while permanently reporting on progress.

Although RPA software can be expensive, the technology offers an alternative to human data processing and can result in low operating costs, decreased cycle times and increased productivity for human employees who no longer are tasked with boring work. All the Large scale and medium scale Industries including departments like CRM, SCM, HRM, Operations and Finance can reap the benefits of the automation technology by decreasing the day to day back office tasks.

Fact file: A report on emerging disruptive technologies published by McKinsey & Company estimates that as the use of disruptive technologies like RPA grows at the rate it is expected to, as many as 110 to 140 million FTEs could be replaced by automation tools and software by the year 2025.

4. UPSIDES OF RPA:

With Robotic Process Automation, one can easily mechanize business processes swiftly and cost effectively. For example, Finance & Accounting is a back-office function that is a perfect fit for RPA, as many of the processes are rules-based and can be easily performed by a robotic workforce. Robotic Process Automation often include 40% to 70% labor cost-reductions and near-zero error rates. The briefing of the benefits is summarized below.

- **Economies of Large Scale**

On average, an RPA robot is 1/3rd of the cost of an average employee's salary (varies from firm to firm). Beyond the obvious rate of remuneration, a robot does not need to take breaks or require benefits. In fact, your robots will work 24 x 7 x 365, even when the world is sleeping.

- **Reduces the cycle time**

For a process involving a Turnaround time of x minutes, post implementation of RPA usually results in a TAT reduction of anywhere between 30% - 70%, i.e. the same process may be done by the robot in a record time of $0.7x - 0.3x$ minutes of time

- **Precision**

RPA minimizes human error, as robots have indefinite attention spans and don't make mistakes in their calculations since they are backed by logic. When a robot encounters a transaction that does not go by its code or parameters, the transaction is dealt as an exception and set aside for a human to intervene.

- **Analytics**

RPA software has an informative dashboard in the form of key analytics where the user will be readily informed what their robots are doing at all times, how many transactions have been executed, how many of them failed as exceptions and were set aside, and so on.

- **Concentration on Core Business**

RPA majorly deals with repetitive, mundane tasks which do not involve much of human intervention, minimal logic and so on. These activities form a very considerable part of the employee's time and hence are Non-core activities. Since RPA handles these going forward, employees can be mobilized to focus on more core activities of the business

- **One-time Investment**

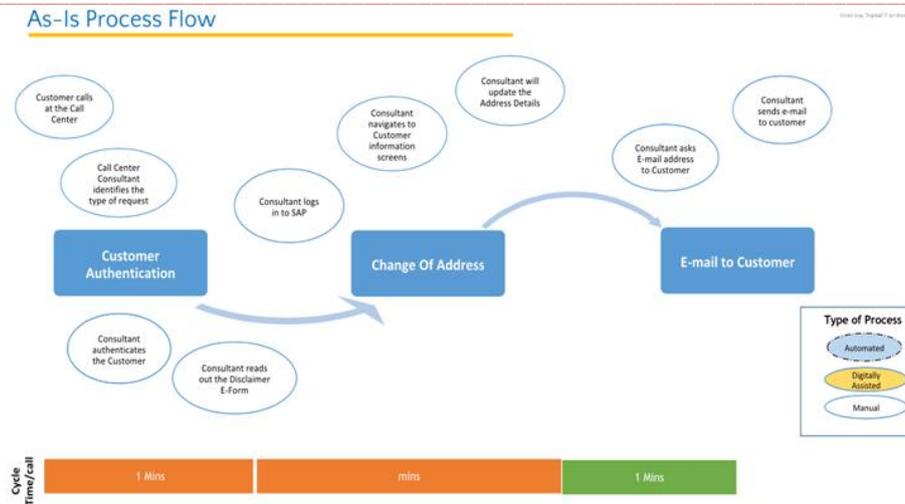
Setting up RPA is a Onetime investment and effort. The robots need not be paid as in the case of employee. Only an annual maintenance fee may be required for any upgrades or new version enhancements, if any

5. How RPA Works:

5.1 Processing without RPA

RPA is a technology, which can outclass any past technology when it comes to the operations. To explain this, we have a live example from the **L&T InfoTech**, one of the leading IT firms in the Industry. This example explains the operations of a leading Multinational Bank's back office.

The below graphical representation explains cycle of a banking query raised by a customer. The basic process of the banking service has four stages and several sub stages under each one of them. The three stages are, Customer authentication, Change of Address & E-mail to Customer. Right from receiving the call from the Customer to emailing back to him, every step needs a human supervision and a monitoring. It takes roughly 8 minutes when the process is not upgraded to RPA technology and operates on the traditional systems.



5.2: Challenges in the Process

The current operations are smooth but they still have some flaws, as there are stages where without human interpretation, the work would not move forward. With that, we have a basic list of challenges faced by the bank's back office operators. These challenges are summarized below:

- **High Volume and FTE Requirement.**

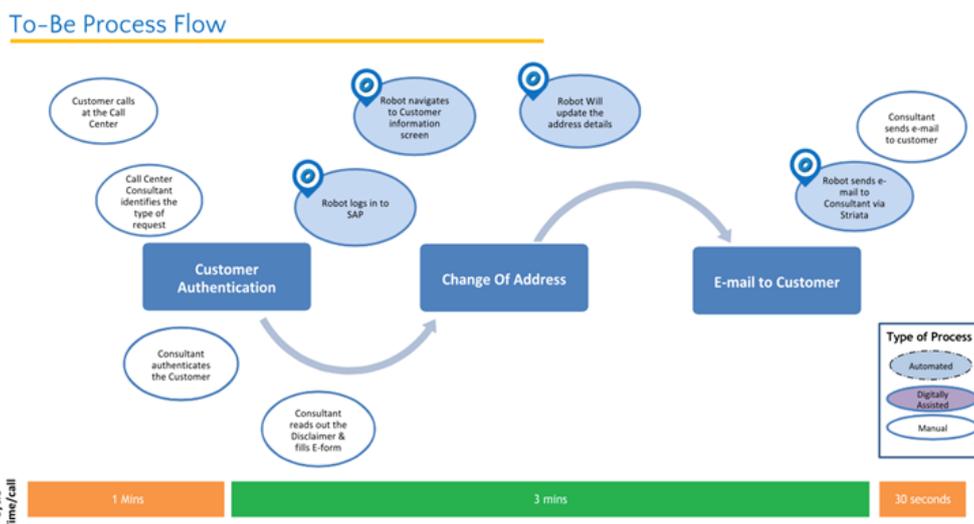
The traditional system needs a lot of human resources, which increases the need of Fully Trained Employees in the organization. This increases the cost of the company. Also the as the system is not automated, there will be times when there are multiple customer requests and query at a time. This will increase the Volume of work for the FTE's, which will again be under work pressure.

- **SLA bound process – Internal & External**

The current systems work on SLA (Service Level Agreement). Every process has a time frame pre-defined within which the request or the query should be solved and the service request (SR) should be closed, During the high volume, it is difficult for the employees to give efficient results with quality and quantity. Breaching SLA would not only affect the process internally, but also externally.

- **Time-consuming activities in long wait of Customers on call requesting support.**

There are times when there is an on call queue of the customers waiting for their queries to be solved. There is a lot of time wasted due to manual processing of the systems. Had there been automation, employees would find the solution to the customer query by the time customer is getting other necessary information. This wouldn't even impact customer in the negative way and save some precious time of the employees as well.



6. Advantages after Adopting RPA:

- Detailed process analysis and maximum automation coverage.
- Substantial reduction in TAT engaged in each process.

- Improved consistency accuracy & key solutions provided at sub process level reducing cycle time.
- Substantial improvement in SLA performance, volume as well as exception handling.
- FTE moves from a more generic role to a more specialized role.

7. CONCLUSION:

Automation is just part of the story as enterprises look to bring the back office in line with the middle and front – though a very important one, as many enterprises will simply fail if they could not digitize many of their core processes (and decide which ones to focus on, as they cannot digitize everything). Being suffocated by manual interventions, legacy applications and mainframes, still reliant on spaghetti code and COBOL, is becoming such an irritating impediment holding back so many enterprises from benefiting from operating in the digital world. RPA is just one tool to help get there – and its now here and ready to use. So let's advance the conversation to driving the circular and neural systems of the enterprise to really make the shift by orienting our talent, creating data access capabilities that are predictive and cognitive which we can use meaningfully to create opportunities, not simply react to them.

8. Venders of RPA:



9. Refrences:

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